

Chapter 13: Managing Soil Survey Data

Chapter 3 introduced the concept of database objects and explained the creation of the new “Mapunit” object. Chapter 7 introduced the objects and tables associated with the aggregated map unit data (Area, Legend, Mapunit and Data Mapunit). Chapter 13 will introduce the database correlation concepts of managing the map units.

There are 3 typical correlation events that affect map unit management.

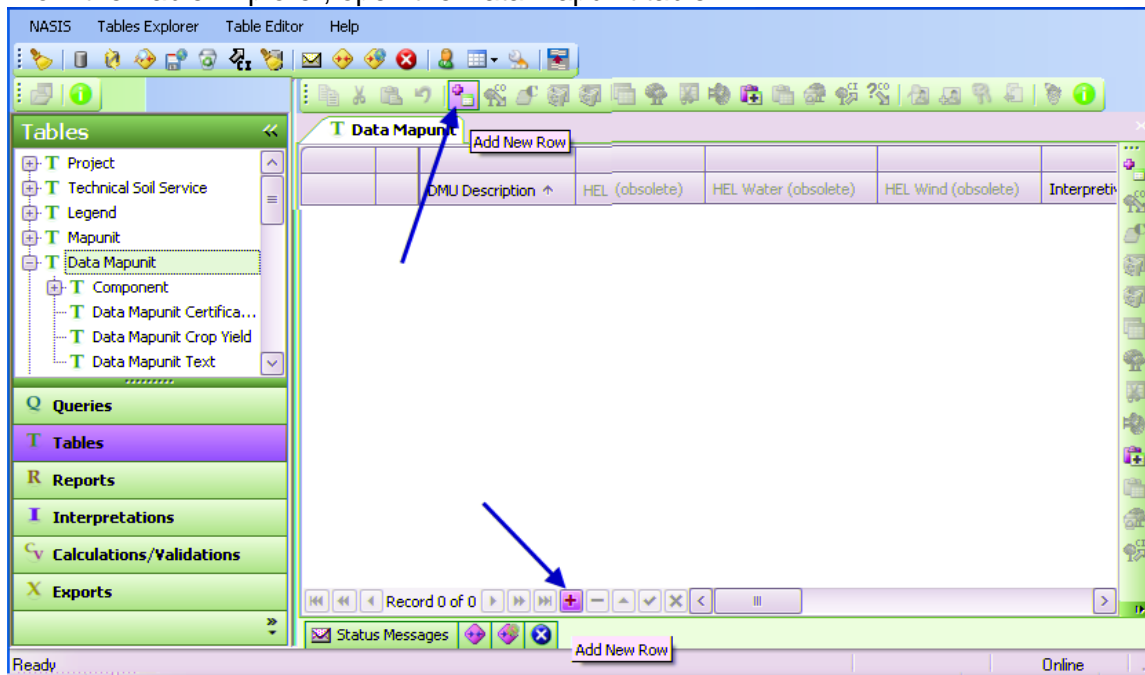
1. creating a new map unit (page 13.1)
2. combining existing map units (page 13.8)
3. splitting an existing map unit into two or more map units (page 13.16)
4. analyzing multiple same named map units into an MLRA concept (Chapter 14)

Creating a New Map Unit

The creation of a new map unit begins with identifying the “map unit concept”; taking the idea and translating it into the database. This process begins in the Data Mapunit object. It is in the Data Mapunit object that the map unit concept is created and once created, then linked to a Mapunit, then subsequently to a Legend.

Step 1 – Create a new Data Mapunit

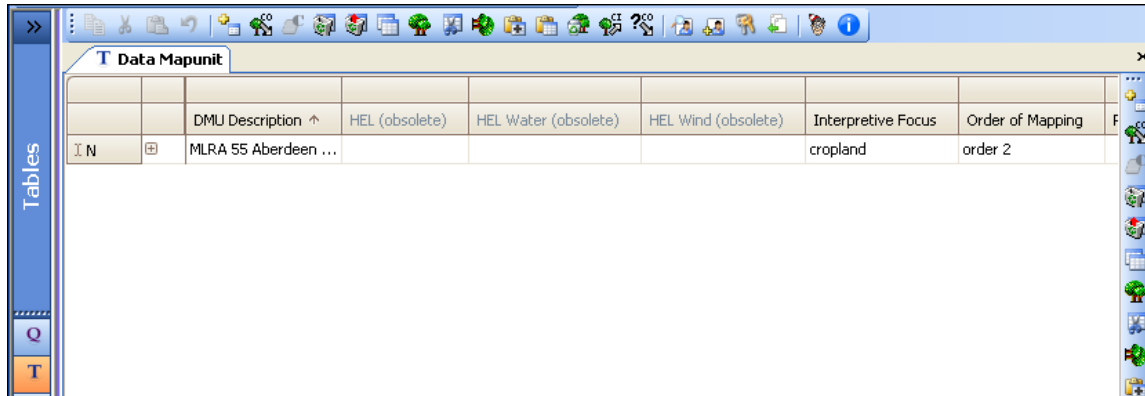
From the Table Explorer, open the Data Mapunit table.



Toolbar icons are available to add a new row or the Table Editor Menu can be used.

Step 2 – Populate the Data mapunit

The majority of the time, a Data Mapunit will be populated by copying an existing Data Mapunit or by copying an existing component and pasting that record into the new Data Mapunit. For this example, The Aberdeen series will be developed into a new map unit.



	DMU Description	HEL (obsolete)	HEL Water (obsolete)	HEL Wind (obsolete)	Interpretive Focus	Order of Mapping
MLRA 55 Aberdeen ...					cropland	order 2

n. JEMCID 5 BDC xisti

Step 4 – Open and populate the Component child tables

DMU Description	HEL (obsolete)	HEL Water (obsolete)	HEL Wind (obsolete)	Interpretive Focus	Order of Mapping	Prod Index	CT Septic Potential	IA
MLRA 55 Aberdeen ...				cropland	order 2			

Component	Comp %	Local Phase	Taxon Kind	Major Component	Slope Gradient
Aberdeen	75 85 95	M	series		0.0 1.0

Horizon	Designation	Disc	Master	Prime	Sub	Low	RV	High	Bottom Depth	Thickness
Ap	M	A				0	0	0	10 15 18	

Once again, click on the plus sign to the left of the Component table to open its child tables. Insert new row(s) into the Horizon table and begin populating the Horizon level data. Completely populate all Component child tables and Horizon child tables.

Population Rules:

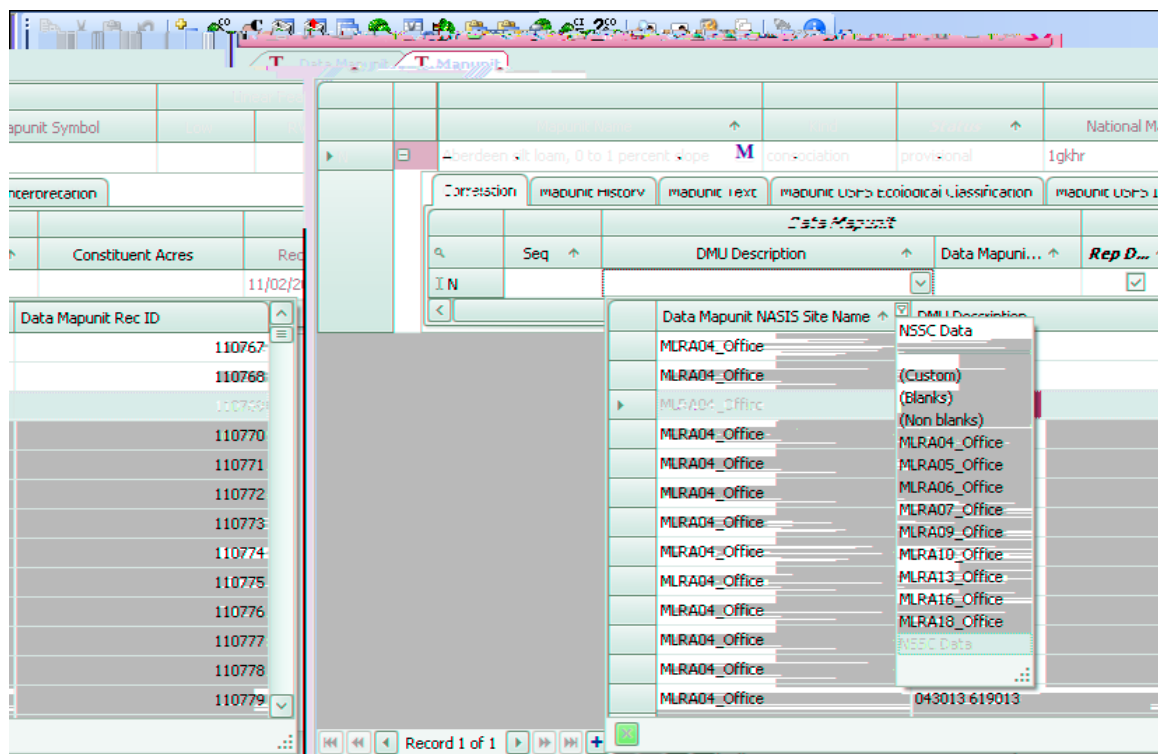
- Minimize the use of calculations by examining existing laboratory or field determined data
- Populate all fields

Step 5 – Create the Mapunit

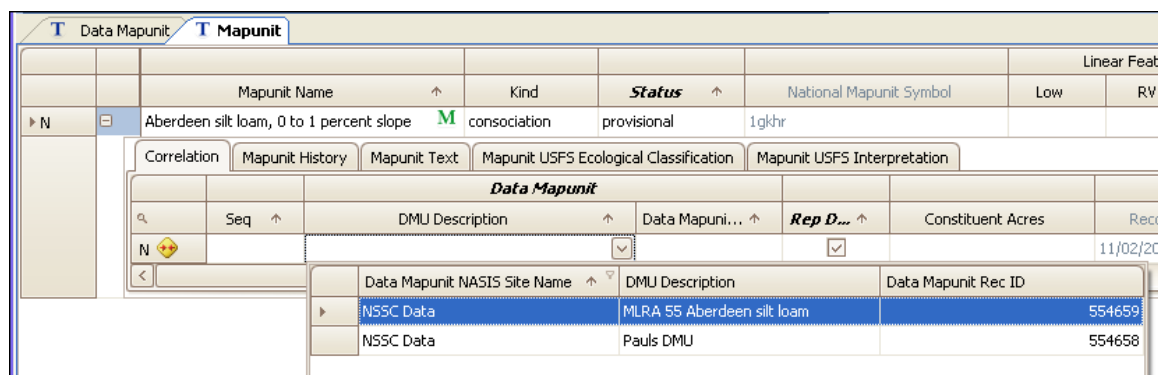
Open the Explorer panel and navigate to the Mapunit table. Insert a new row and begin populating the mapunit fields. Notice the map unit is listed as a provisional map unit. Once the edit is ended the National Map unit Symbol is assigned. This value is assigned by converting the record ID number to a Base31 alphanumeric character.

Mapunit Name	Kind	Status	National Mapunit Symbol	Linear Feature Width
Aberdeen silt loam, 0 to 1 percent slope	M consociation	provisional	1gthr	

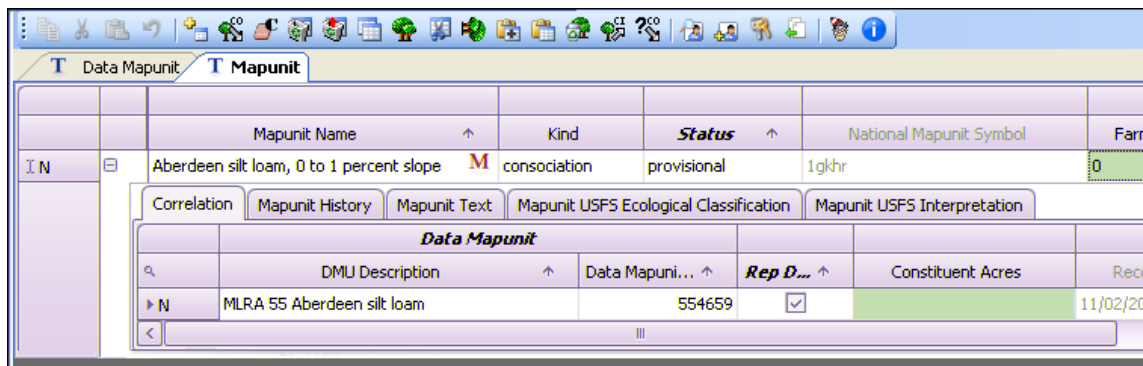
Step 6 – Link the Mapunit and Datamapunit



Open the Mapunit child tables by clicking on the plus sign to the left of the table. Insert a new row into the Correlation table. Use the choice list in the DMU Description field. All choices lists are temporary tables and can be sorted or filtered. In this instance, the new Data mapunit is owned by the NSSC Data site; by filtering on this site the DMU can be easily identified:

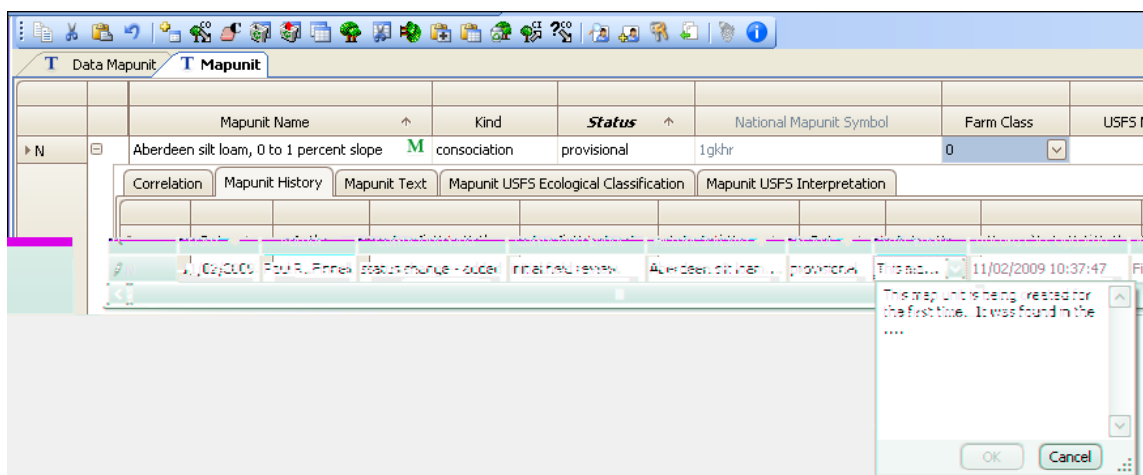


The DMU is now linked to its map unit.



Step 7 – Document the Mapunit

The map unit **must be documented** at each correlation event. The creation of the map unit initiates the first documentation of the map unit. Open the Mapunit History table and populate the first record.



The map unit is to be documented in the Mapunit History table at all subsequent correlation events.

Step 8 – Linking the Mapunit to the Legend

Notice that the map unit status is assigned in the Mapunit table. As a new map unit, this status is “provisional”.

To link this new map unit to a legend, load the legend into the Editor panel and verify the legend is “checked out” in order to edit the legend.

Open the Legend child tables and view the Legend Mapunit table.

Area							
Area Type NASIS Site Name	Area Type Name	Area Symbol	Area Name	Area Acres	MLRA Office	Legend Description	Survey Sta
NSSC Pangaea	Non-MLRA Soil Survey Area	ND003	Barnes County, North Dakota	968700	bismarck, nd	Detailed Soil Map Legend	extensive re

Mapunit						
Seq	Mapunit Symbol	Total Acres	National Mapunit Symbol	Mapunit Name	Mapunit Sta	
2	3330 d2rx			Tonka silt loam, 0 to 1 percent slopes	correlated	
3	19310 d2s1			Parnell silty clay loam, 0 to 1 percent slopes	correlated	
6	15010 d2sg			Southam silty clay loam, 0 to 1 percent slopes	correlated	
9	1860 d2t5			Nutley silty clay, 0 to 2 percent slopes	correlated	
9B	3740 d2tb			Nutley silty clay, 2 to 6 percent slopes	correlated	
9D	3570 d2tc			Nutley silty clay, 6 to 15 percent slopes	correlated	
12	9650 d2rg			Lismore-Kranzburg silty clay loams, 0 to 2 per...	correlated	
13B	8880 d2rh			Kranzburg-Lismore silty clay loams, 2 to 6 per...	correlated	
14B	137360 d2rj			Barnes-Buse loams, 3 to 6 percent slopes	correlated	
14C	51950 d2rk			Barnes-Buse loams, 6 to 9 percent slopes	correlated	

This legend must be “checked out”.

Area							
Area Type NASIS Site Name	Area Type Name	Area Symbol	Area Name	Area Acres	MLRA Office	Legend Description	Survey Sta
NSSC Pangaea	Non-MLRA Soil Survey Area	ND003	Barnes County, North Dakota	968700	bismarck, nd	Detailed Soil Map Legend	extensive

Mapunit						
Seq	Mapunit Symbol	Total Acres	National Mapunit Symbol	Mapunit Name	Mapunit Sta	
2	3330 d2rx			Tonka silt loam, 0 to 1 percent slopes	correlated	
3	19310 d2s1			Parnell silty clay loam, 0 to 1 percent slopes	correlated	
6	15010 d2sg			Southam silty clay loam, 0 to 1 percent slopes	correlated	
9	1860 d2t5			Nutley silty clay, 0 to 2 percent slopes	correlated	
9B	3740 d2tb			Nutley silty clay, 2 to 6 percent slopes	correlated	
9D	3570 d2tc			Nutley silty clay, 6 to 15 percent slopes	correlated	
12	9650 d2rg			Lismore-Kranzburg silty clay loams, 0 to 2 per...	correlated	
13B	8880 d2rh			Kranzburg-Lismore silty clay loams, 2 to 6 per...	correlated	
14B	137360 d2rj			Barnes-Buse loams, 3 to 6 percent slopes	correlated	
14C	51950 d2rk			Barnes-Buse loams, 6 to 9 percent slopes	correlated	
14D	9440 d2rl			Barnes-Buse loams, 9 to 15 percent slopes	correlated	
15	2570 d2rm			Swenoda-Lanona fine sandy loams, 0 to 3 per...	correlated	

Return to the map unit table and copy the new mapunit:

Mapunit Name	Kind	Status	Nation
Aberdeen silt loam, 0 to 1 percent slope	M consociation	provisional	1gkhr

Return to the Legend Mapunit table and paste in the new map unit:

Area Type	Area Name	Area Symbol	Area Acres	MLRA Office	Legend Description	Survey Status
NSSC Pangaea	Non-MLRA Soil Survey Area	ND003	Barnes County, North Dakota	968700	bismarck, nd	Detailed Soil Map Legend
Legend Mapunit	Legend Area Overlap	Legend Certification History	Legend Export Certification History	Legend Text		
Seq	Mapunit Symbol	Total Acres	National Mapunit Symbol	Mapunit Name	Mapunit Status	
1	400 1gkhr			Aberdeen silt loam, 0 to 1 percent slope	provisional	
2	3330 d2rx			Tonka silt loam, 0 to 1 percent slopes	correlated	
3	19310 d2s1			Parnell silty clay loam, 0 to 1 percent slopes	correlated	

Notice the two fields to be populated are the Mapunit Symbol and the Total Acres.

Area Type	Area Name	Area Symbol	Area Acres	MLRA Office	Legend Description	Survey Status
NSSC Pangaea	Non-MLRA Soil Survey Area	ND003	Barnes County, North Dakota	968700	bismarck, nd	Detailed Soil Map Legend
Legend Mapunit	Legend Area Overlap	Legend Certification History	Legend Export Certification History	Legend Text		
Seq	Mapunit Symbol	Total Acres	National Mapunit Symbol	Mapunit Name	Mapunit Status	
1	400 1gkhr			Aberdeen silt loam, 0 to 1 percent slope	provisional	
2	3330 d2rx			Tonka silt loam, 0 to 1 percent slopes	correlated	
3	19310 d2s1			Parnell silty clay loam, 0 to 1 percent slopes	correlated	

The data is then saved to the national server and the legend is “Checked In”.

At the time of “Correlation”, rows will be inserted into the Data Mapunit Certification History table and the Legend Certification History table:

- The Soil Survey Leader will certify the “Quality Control” has been completed.
- And, the MLRA Office will add a second row of data and certify the “Quality Assurance” has been completed.

After Certification, the Mapunit Status is changed to “correlated” and the State Soil Scientist is informed that the data has passed QC and QA and is ready to submit to the Staging Server for release to the Soil Data Mart.

This completes the scenario of creating a new map unit.

Combining Existing Mapunits

This scenario can encompass the:

- combining of two consociations into a complex, or
- combining two similar map units by mapping “out” a closely similar map unit if favor of a dominant map unit, or
- combining similar named map units in various survey legends and replacing with a single map unit for all legends.

Regardless of the scenario, the steps will remain the same. This scenario will combine two existing consociations into a new complex.

Mapunit Name	Kind	Status	National Mapunit Symbol	Farm Class
Arveson loam, 0 to 1 percent slopes	consociation	correlated	cdd6	2
Arvilla sandy loam, 6 to 9 percent slopes	consociation	correlated	cdd7	0
Arvilla-Sioux sandy loams, 0 to 2 percent slopes	complex	correlated	cdd8	0
Sioux loam, 6 to 25 percent slopes	consociation	correlated	cdf1	0
Svea loam, 0 to 3 percent slopes	consociation	correlated	cdfm	1
Svea loam, 3 to 6 percent slopes	consociation	correlated	cdfn	1
Swenoda fine sandy loam, 0 to 3 percent slopes	consociation	correlated	cdfs	1
Swenoda fine sandy loam, 3 to 6 percent slopes	consociation	correlated	cdft	1
Tiffany fine sandy loam, 0 to 1 percent slopes	consociation	correlated	cdfv	2
Tonka silt loam, 0 to 1 percent slopes	consociation	correlated	cdfw	2
Vallers loam, 0 to 1 percent slopes	consociation	correlated	cdfx	2

Note the Arveson and the Tiffany consociations. It is determined that these two map units will be combined into a new complex. The data is already loaded into the selected set.

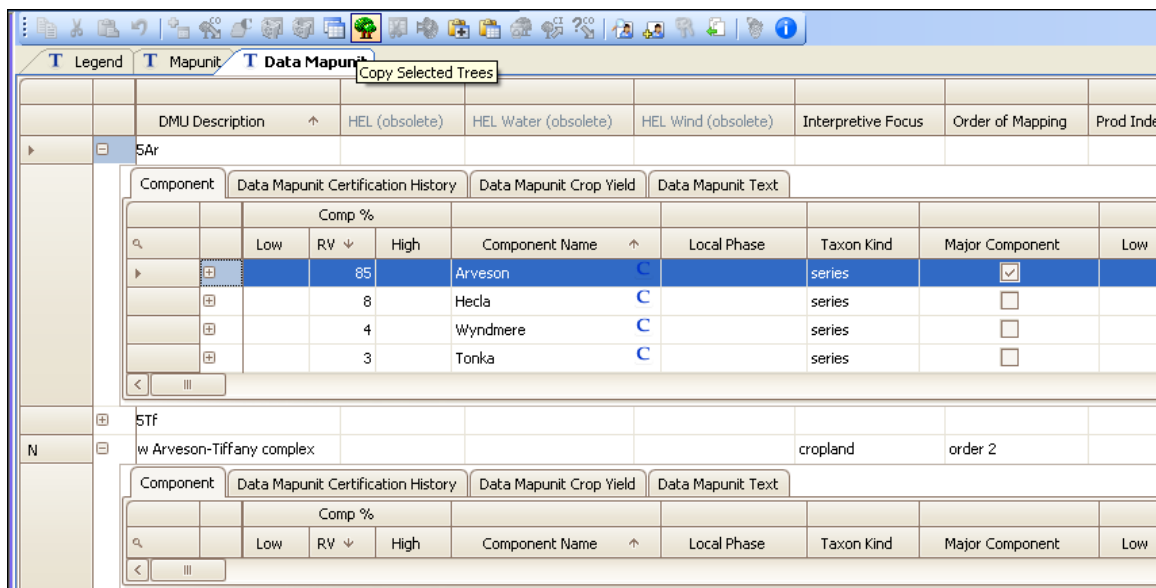
Step 1 – Create a new Data Mapunit

DMU Description	HEL (obsolete)	HEL Water (obsolete)	HEL Wind (obsolete)	Interpretive Focus	Order of Mapping
075WyA					
075ZaD					
075ZaF					
049110 (Souris River Valley)					
Miscellaneous water					
New Arveson-Tiffany complex				cropland	order 2

A new record is created in the Data Mapunit table and data is populated.

Step 2 – Copy existing components into New Data Mapunit

Moving to the Arvena Data Mapunit, the Component table is opened and the “Tree” (Parent and child tables) is copied and then pasted into the new Data Mapunit.



DMU Description	HEL (obsolete)	HEL Water (obsolete)	HEL Wind (obsolete)	Interpretive Focus	Order of Mapping	Prod Index
5Ar						

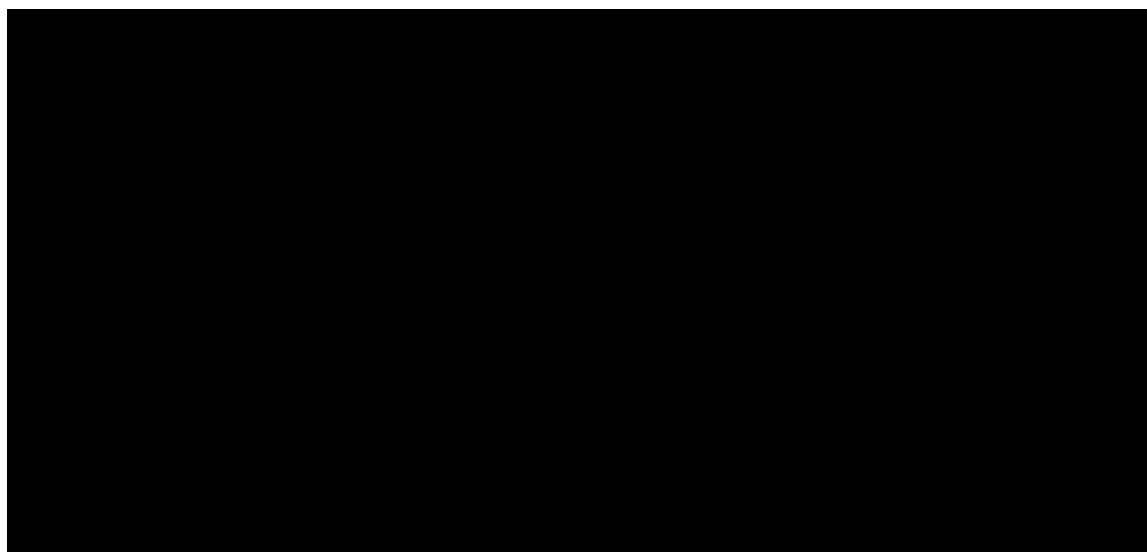
Component	Data Mapunit Certification History	Data Mapunit Crop Yield	Data Mapunit Text
Arveson			
Hecla			
Wyndmere			
Tonka			

Low	RV	High	Component Name	Local Phase	Taxon Kind	Major Component	Low
85			Arveson		series	<input checked="" type="checkbox"/>	
8			Hecla		series	<input type="checkbox"/>	
4			Wyndmere		series	<input type="checkbox"/>	
3			Tonka		series	<input type="checkbox"/>	

Component	Data Mapunit Certification History	Data Mapunit Crop Yield	Data Mapunit Text
Arveson-Tiffany complex			

Low	RV	High	Component Name	Local Phase	Taxon Kind	Major Component	Low

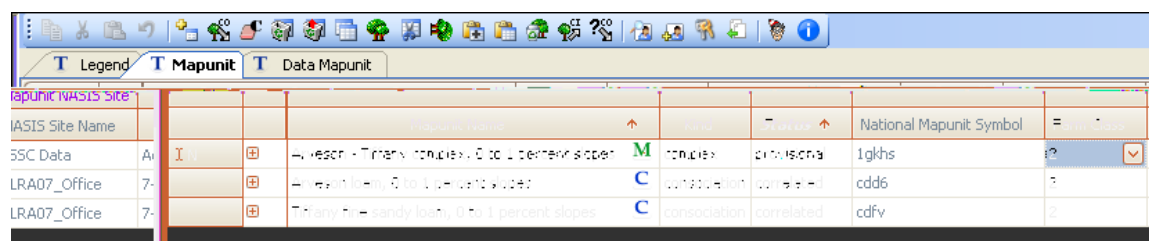
After pasting in the Arveson, the Tiffany Data Mapunit is opened and the Tiffany is copied and pasted into the new Data mapunit:



The result is a new Data Mapunit for the Arveson-Tiffany complex. The component percentages will be adjusted to reflect the new complex. In addition all component fields will be reviewed to match the new map unit concept.

Step 3 – Create a New Mapunit

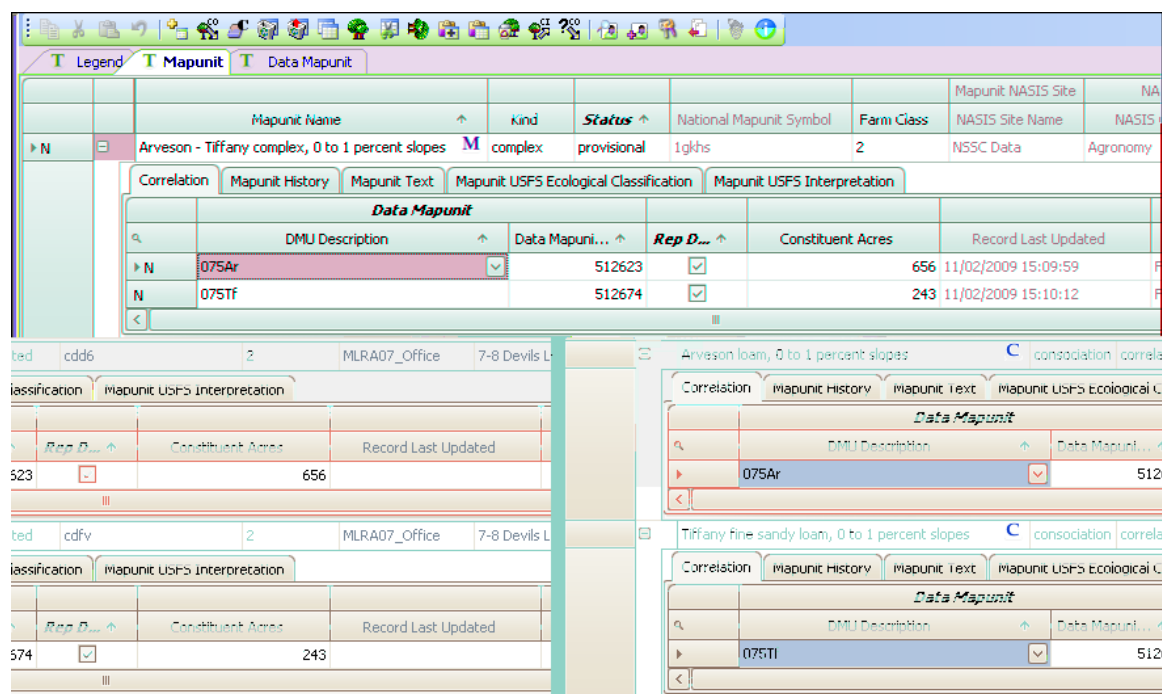
Returning to the Mapunit table, a new row is inserted and the Mapunit table is populated:



IASIS Site Name	Mapunit Name	Kind	Status	National Mapunit Symbol	Farm Class	Mapunit NASIS Site
SSC Data	Arveson - Tiffany complex, 0 to 1 percent slopes	complex	provisional	1gkhs	2	NSSC Data
MLRA07_Office	Arveson loam, 0 to 1 percent slopes	consolidation	consolidated	cdd6	2	MLRA07_Office
MLRA07_Office	Tiffany fine sandy loam, 0 to 1 percent slopes	consolidation	consolidated	cdfv	2	MLRA07_Office

Step 4 – Link the Old Mapunits to the New Mapunit

The map units must be linked together in order to build a conversion legend – a legend used to identify what map unit was replaced with new symbols. To complete this step, the correlation records from the old map units are copied and pasted into the new map unit.



DMU Description	Data Mapunit	Rep D...	Constituent Acres	Record Last Updated
075Ar	512623	<input checked="" type="checkbox"/>	656	11/02/2009 15:09:59
075Tf	512674	<input checked="" type="checkbox"/>	243	11/02/2009 15:10:12

Step 5 – Link the New Data Mapunit to the New Mapunit

Return to the Data Mapunit table and copy the row of data from the new Data Mapunit. Then paste this into the Correlation table for the new Mapunit.

Copy Selected Rows						
	DMU Description	HEL (obsolete)	HEL Water (obsolete)	HEL Wind (obsolete)	Interpretive Focus	Order of Mapping
	075Ar					
	075Tf					
N	New Arveson-Tiffany complex				cropland	order 2
Component						
Data Mapunit Certification History						
Data Mapunit Crop Yield						
Data Mapunit Text						
	Comp %			Component Name	Local Phase	Taxon Kind
	Low	RV	High			Major Component
N		88		Tiffany		series
N		85		Arveson		series

Then pasting the record into the Correlation table,

Paste Rows/Trees (Inserting New Rows)						
	Mapunit Name	Kind	Status	National Mapunit Symbol	Farm Class	Mapunit M
N	Arveson - Tiffany complex, 0 to 1 percent slopes	M	provisional	1gkhs	2	NSSC Dat
Correlation						
Mapunit History						
Mapunit Text						
Mapunit USFS Ecological Classification						
Mapunit USFS Interpretation						
Data Mapunit						
	DMU Description	Data Mapuni...	Rep D...	Constituent Acres	Record	
N	075Ar	512623	<input checked="" type="checkbox"/>	656	11/02/2009	
N	075Tf	512674	<input checked="" type="checkbox"/>	243	11/02/2009	
N	New Arveson-Tiffany complex	554660	<input checked="" type="checkbox"/>		11/02/2009	
	Arveson loam, 0 to 1 percent slopes	C	consociation	correlated	cdd6	2
	Tiffany fine sandy loam, 0 to 1 percent slopes	C	consociation	correlated	cdfv	2

The Correlation table for the new map unit now contains the correlation records from the two map units that it will eventually replace in addition to the new Data Mapunit created for the complex. The “constituent acres” identifies the acres that each former map unit contributed to the new map unit.

Step 6 – Document the Mapunit

All of the mapunits are documented to identify the changes.

Legend										Mapunit										Data Mapunit																																																																															
Mapunit Name										Kind		Status		National Mapunit Symbol		Farm Class		Mapunit NASIS Site		NASIS																																																																															
Arveson - Tiffany complex, 0 to 1 percent slopes										M		complex		provisional		1gkhs		2		NSSC Data Agronomy																																																																															
Correlation										Mapunit History										Mapunit Text										Mapunit USFS Ecological Classification										Mapunit USFS Interpretation																																																											
Date										Author										Correlation Kind										Correlation Event										Historical Name										Status										Text Entry										Record Last Updated										Rec																			
11/02/2009										Paul R. Finnell										status change - added										initial field review										provisional										This co...										11/02/2009 15:37:30										Finn										N																			
loam, 0 to 1 percent slopes										C										consociation										correlated										cdd6										2										This complex was created by combining the Arveson loam and the Tiffany fine sandy loam map units										ake										Arveson										Correlati									
on										Mapunit History										Mapunit Text										Mapunit USFS Ecological Classification										Mapunit USFS Interpretation										Rec										Correlati																																							
12/18/2006										Earnie Jensen										name change										correlation amend...										Arveson loam										correlated										Rec										Correlati																													
Tiffany fine sandy loam, 0 to 1 percent slopes										C										consociation										correlated										cdfv										2										ake										Arveson										Correlati																			
Correlation										Mapunit Text										Mapunit USFS Ecological Classification										Mapunit USFS Interpretation										Rec										Correlati																																																	
Date										Author										Correlation Kind										Correlation Event										Historical Name										Status										Text Entry										Record Last Updated										NAS																			
ation amend...										Tiffany fine sandy ...										correlated										This correlatio										12/18/2006										Fred Aziz										name change										correl																													

When complete, each map unit will have a record in the Mapunit History table. The new map unit will document the map units that were combined to create the complex. The old map units will document why the map unit was combined and to what map unit it was combined into.

Remember that NASIS is a read only database and the existing map units must be "Checked Out" in order to insert a new record in the Mapunit History table.

Step 7 – Link the new Mapunit to the Legend

Set the new Data Mapunit to be the Representative DMU and “uncheck” the old DMU correlation records. A map unit can only have one representative DMU.

In the Mapunit table, highlight and copy the New Map unit row of data:

Mapunit Name						Kind	Status	National Mapunit Symbol	Farm Class
N	Arveson - Tiffany complex, 0 to 1 percent slopes					complex	correlated	1gkhs	2

Data Mapunit				
	DMU Description	Data Mapuni...	Rep D...	Constituent Acres
N	075Ar	512623	<input type="checkbox"/>	656
N	075Tf	197259	<input type="checkbox"/>	243
N	New Arveson-Tiffany complex	554660	<input checked="" type="checkbox"/>	1

Then navigate to the Legend table, verify the Legend has been “Checked Out” and is in an Edit mode (Note the “E” status). Then paste the new map unit record into the Legend Mapunit table:

Area							
	Area Type NASIS Site Name	Area Type Name	Area Symbol	Area Name	Area Acres	MLRA Office	Legend Description
E	NSSC Pangaea		Non-MLRA Soil Survey Area	ND075	Renville County, North Dak...	571300 bismarck, nd	Detailed Soil Map Legend

Mapunit						
	Seq	Mapunit Symbol	Total Acres	National Mapunit Symbol	Mapunit Name	Mapunit Status
N		?		1gkhs	Arveson - Tiffany complex, 0 to 1 percent slo...	provisional
E		Ar	656	cdd6	Arveson loam, 0 to 1 percent slopes	correlated
E		AvC	211	cdd7	Arvilla sandy loam, 6 to 9 percent slopes	correlated

The new map unit symbol and new map unit acres are then populated.

Area							
	Area Type NASIS Site Name	Area Type Name	Area Symbol	Area Name	Area Acres	MLRA Office	Legend Description
M	NSSC Pangaea		Non-MLRA Soil Survey Area	ND075	Renville County, North Dak...	571300 bismarck, nd	Detailed Soil Map Legend

Mapunit						
	Seq	Mapunit Symbol	Total Acres	National Mapunit Symbol	Mapunit Name	Mapunit Status
E		Ar	656	cdd6	Arveson loam, 0 to 1 percent slopes	correlated
N		AtA	899	1gkhs	Arveson - Tiffany complex, 0 to 1 percent slo...	provisional
E		AvC	211	cdd7	Arvilla sandy loam, 6 to 9 percent slopes	correlated

Notice that the map unit is “provisional”. Through correlation events the map unit will progress from “provisional” to “approved” to “correlated” status. The status is changed after the Quality Control and Quality Assurance has been certified.

Step 8 – Certification

Before the new map unit is changed to a status of “correlated” and before released to the State Soil Scientist for publication, the data must be certified. Return to the Data Mapunit object and open the “Data Mapunit Certification History” child table:

The screenshot shows a software interface with three tabs: 'Legend', 'Mapunit', and 'Data Mapunit'. The 'Data Mapunit' tab is active. It displays a table with columns: DMU Description, HEL (obsolete), HEL Water (obsolete), HEL Wind (obsolete), Interpretive Focus, Order of Mapping, and Prod Index. Below this table are three sub-tabs: 'Component', 'Data Mapunit Certification History', 'Data Mapunit Crop Yield', and 'Data Mapunit Text'. The 'Data Mapunit Certification History' sub-tab is active, showing a table with columns: Reviewer, NASIS User Name, Certification Date, Certification Kind, DMU Certification Status, Certification Text, and Record Last Update. The table contains two rows of data. A text box on the right side of the interface contains the text 'explanation of the certification' and has 'OK' and 'Cancel' buttons at the bottom.

Reviewer	NASIS User Name	Certification Date	Certification Kind	DMU Certification Status	Certification Text	Record Last Update
N	Jensen, Earnie	11/11/2009	quality assurance	certified, all components	explanation of...	11/02/2009 15:50:3
N	Bott, Wade	11/02/2009	quality control	certified, all components	explanation of the certification	

The Soil Survey Leader and the Soil Data Quality Specialist are required to certify the Data Mapunit.

Then, return to the Legend Object and open the Legend Certification History table and repeat the process:

The screenshot shows a software interface with three tabs: 'Legend', 'Mapunit', and 'Data Mapunit'. The 'Legend' tab is active. It displays a table with columns: Area Type NASIS Site Name, Area Type Name, Area Symbol, Area Name, Area Acres, MLRA Office, and Legend Description. Below this table are five sub-tabs: 'Legend Mapunit', 'Legend Area Overlap', 'Legend Certification History', 'Legend Export Certification History', and 'Legend Text'. The 'Legend Certification History' sub-tab is active, showing a table with columns: Reviewer, NASIS User Name, Certification Date, Certification Kind, Legend Certification Status, Certification Text, and Record Last Update. The table contains two rows of data. A text box on the right side of the interface contains the text 'certifying the data is ready to submit for publication' and has 'OK' and 'Cancel' buttons at the bottom.

Reviewer	NASIS User Name	Certification Date	Certification Kind	Legend Certification Status	Certification Text	Record Last Update
N	Jensen, Earnie	11/02/2009	quality control	certified	certifying the ...	11/02/2009 15:53:5
M	Bott, Wade	07/15/2009	quality assurance	certified	certifying the data is ready to submit for publication	

Step 9 – Modify the Mapunit Status

Return to the Mapunit Object and modify the mapunit status to reflect the correlation – the new map unit is now “Correlated” and the old map units are set to “Additional”:

T Legend T Mapunit T Data Mapunit									
		Mapunit Name ^	Kind	Status ^	National Mapunit Symbol	Farm Class	Record Last Updated	Record Last Upda...	Rec ID
N		Arveson - Tiffany complex, 0 to 1 percent slopes	complex	correlated	1gkhs	2	11/02/2009 15:56:54	Finnell, Paul R.	2452672
M		Arveson loam, 0 to 1 percent slopes	consociation	additional	cdd6	2	11/02/2009 15:56:56	Finnell, Paul R.	339611
M		Tiffany fine sandy loam, 0 to 1 percent slopes	consociation	additional	cdfv	2	11/02/2009 15:57:01	Finnell, Paul R.	339662

Notice the “Record Last Updated” and “NASIS User Name” fields. These fields are populated each time the record is modified. Each record in the database now records the last person to edit and the data and time of the edit.

The “Combining Existing Mapunits” scenario is completed.

Splitting Map Units

This scenario is a reverse of the previous scenario. The steps in splitting a mapunit are to

Step 1 – Create new Data Mapunits

Create new Data Mapunits and edit to reflect the new map unit concepts. This can be accomplished by copying the original DMU and pasting it to create copies. Then each copy is modified to reflect the new map unit concept of the split.

The screenshot shows the 'Data Mapunit' tab in a software application. It displays three mapunits under the '075BdB' parent unit.

DMU Description	Interpretive Focus	Order of Mapping	Prod Index	DMU NASIS Site	NASIS Group	Object La																																												
075BdB				MLRA07_Office	7-8 Devils Lake, Nor...	05/15/20																																												
<div>Component</div> <div>Data Mapunit Certification History</div> <div>Data Mapunit Crop Yield</div> <div>Data Mapunit Text</div>																																																		
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Step 2 – Populate the Correlation Table

Return to the Mapunit table.

Check out the original map unit.

Enter the new Data Mapunits into the Correlation table of the original Mapunit and set the new Rep DMU to unchecked.

T Legend		T Mapunit		T Data Mapunit		
		Mapunit Name ↑	Kind	Status ↑	National Mapunit Symbol	Farm Class
► M		Barnes-Buse loams, 3 to 6 percent slopes	complex	correlated	cddh	1
<div>Correlation</div> <div>Mapunit History</div> <div>Mapunit Text</div> <div>Mapunit USFS Ecological Classification</div> <div>Mapunit USFS Interpretation</div>						
Data Mapunit						
		DMU Description ↑	Data Mapuni... ↑	Rep D... ↑	Constituent Acres	
N		075BdB New Barnes Component	554661	<input type="checkbox"/>		
N		075BdB New Buse Component	554662	<input type="checkbox"/>		
E		075BdB	512633	<input checked="" type="checkbox"/>	3235	

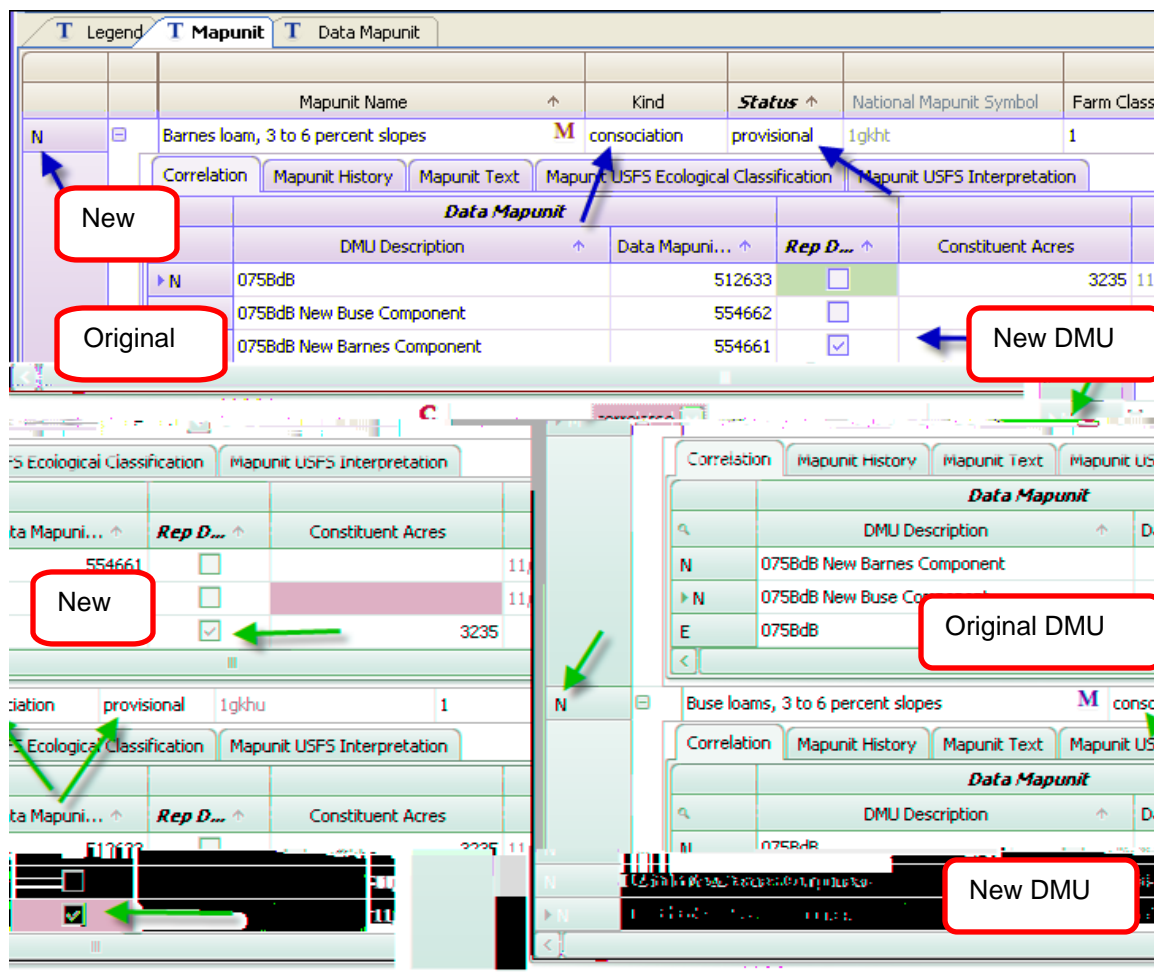
Step 3 – Document the Mapunit

Move to the Mapunit History table and document the map unit. By doing so now, before copying and pasting the map unit, the new map units will retain the original documentation.

Correlation Mapunit History Mapunit Text Mapunit USFS Ecological Classification Mapunit USFS Interpretation						
	Date ↓	Author	Correlation Kind	Correlation Event	Historical Name ↑	Status ↑
IN	11/02/2009	Paul R. Finnell	status change - added	progress field review	Barnes-Buse loams, 3 to 6 percent slopes	correlated

Step 4 - Create the new Mapunits

This is best done by copying the original map unit and pasting it twice to represent the split. By copying the original map unit, the correlation records are retained. Since the Correlation table now contains the new DMU records the original mapunit will be linked to the new mapunits. Change the Mapunit Name and set the mapunit Status to “provisional” on the new map units.



Step 5 – Copy the Provisional Mapunits

Copy the provisional map units and paste into the appropriate Legend Mapunit table. Using the Ctrl button and the left click, Highlight both mapunit records then copy selected trees:

Legend Mapunit Data Mapunit Copy Selected Trees

	Mapunit Name	Kind	Status	National Mapunit S
N	Barnes loam, 3 to 6 percent slopes	M	consociation	provisional

Correlation Mapunit History Mapunit Text Mapunit USFS Ecological Classification Mapunit USFS Inte

Data Mapunit				
	DMU Description	Data Mapuni...	Rep D...	Constitu
N	075BdB	512633	<input type="checkbox"/>	
N	075BdB New Buse Component	554662	<input type="checkbox"/>	
N	075BdB New Barnes Component	554661	<input checked="" type="checkbox"/>	

M Barnes-Buse loams, 3 to 6 percent slopes C complex correlated cddh

Correlation Mapunit History Mapunit Text Mapunit USFS Ecological Classification Mapunit USFS Inte

Data Mapunit				
	DMU Description	Data Mapuni...	Rep D...	Constitu
N	075BdB New Barnes Component	554661	<input type="checkbox"/>	
N	075BdB New Buse Component	554662	<input type="checkbox"/>	
E	075BdB	512633	<input checked="" type="checkbox"/>	

provisional light

N Barnes-Buse loams, 3 to 6 percent slopes M consociation

Classification Mapunit USFS Inte Correlation Mapunit History Mapunit Text Mapunit USFS Ecological

Data Mapunit				
ation	Data Mapuni...	Rep D...	Constitu	DMU Descrip
	512633	<input type="checkbox"/>		N 075BdB
onent	554661	<input type="checkbox"/>		N 075BdB New Barnes Com
nent	554662	<input checked="" type="checkbox"/>		N 075BdB New Buse Compo

Step 6 – Link the New Provisional Mapunits into the Legend

After being copied, the new map units are then pasted into the Legend. The publication Mapunit Symbol and the Total Acres are then added to the table.

Legend							
Area							
	Area Type NASIS Site Name	Area Type Name	Area Symbol	Area Name ↑	Area Acres	MLRA Office	Legend D
▶ M	NSSC Pangaea	Non-MLRA Soil Survey Area	ND075	Renville County, North Dak...	571300	bismarck, nd	Detailed Sc
	Legend Mapunit	Legend Area Overlap	Legend Certification History	Legend Export Certification History	Legend Text		
Mapunit							
	Mapunit Symbol ↑	Total Acres	National Mapunit Symbol	Mapunit Name	Mapunit Status		
N	?		1gkht	Barnes loam, 3 to 6 percent slopes	provisional	11	
N	?		1gkhu	Buse loams, 3 to 6 percent slopes	provisional	11	
E	BdC	2398	cddj	Barnes-Buse loams, 6 to 9 percent slopes	correlated		
E	BfA	1711	cddk	Barnes-Cresbard loams, 0 to 3 percent slopes	correlated		
E	BbB	3195	cddl	Barnes-Balaton loams, 3 to 6 percent slopes	correlated		

▶	NSSC Pangaea	Non-MLRA Soil Survey Area	ND075	Renville County, North Dak...	571300	bismarck, nd	Detailed Sc
	Legend Mapunit	Legend Area Overlap	Legend Certification History	Legend Export Certification History	Legend Text		
Mapunit							
	Mapunit Symbol ↑	Total Acres	National Mapunit Symbol	Mapunit Name	Mapunit Status		
N	2156	4560	1gkht	Barnes loam, 3 to 6 percent slopes	provisional		
N	2157	5640	1gkhu	Buse loams, 3 to 6 percent slopes	provisional		

Step 7 – Certification of DMU and Legend

Before the new map unit is changed to a status of “correlated” and before released to the State Soil Scientist for publication, the data must be certified. Return to the Data Mapunit object and open the “Data Mapunit Certification History” child table:

The Soil Survey Leader and the Soil Data Quality Specialist are required to certify the Data Mapunit.

N	075BdB New Barne...						
	Component	Data Mapunit Certification History	Data Mapunit Crop Yield	Data Mapunit Text			
	Reviewer						
	NASIS User Name	Certification Date ↓	Certification Kind	DMU Certification Status	Certification Text		
▶ N	Jensen, Earnie	11/02/2009	quality control	certified, all components			
N	Bott, Wade	07/15/2009	quality assurance	certified			

▶ N	075BdB New Buse ...						
	Component	Data Mapunit Certification History	Data Mapunit Crop Yield	Data Mapunit Text			
	Reviewer						
	NASIS User Name	Certification Date ↓	Certification Kind	DMU Certification Status	Certification Text		
▶ N	Jensen, Earnie	11/02/2009	quality control	certified, all components			
N	Bott, Wade	07/15/2009	quality assurance	certified			

Then, return to the Legend Object and open the Legend Certification History table and repeat the process:

The screenshot shows the 'Legend Certification History' table within the 'Legend' object. The table has columns for 'Reviewer', 'NASIS User Name', 'Certification Date', 'Certification Kind', 'Legend Certification Status', 'Certification Text', and 'Record Last Update'. Two entries are visible: one by 'Jensen, Earnie' dated 11/02/2009 with status 'certified', and another by 'Bott, Wade' dated 07/15/2009 with status 'certified'. A dropdown menu is open for the 'Certification Text' column, showing the text 'certifying the data is ready to submit for publication'.

Reviewer	NASIS User Name	Certification Date	Certification Kind	Legend Certification Status	Certification Text	Record Last Update
I N	Jensen, Earnie	11/02/2009	quality control	certified	certifying the ...	11/02/2009 15:53:5
M	Bott, Wade	07/15/2009	quality assurance	certified	certifying the data is ready to submit for publication	

Step 8 – Modify the Mapunit Status

Return to the Mapunit Object and modify the mapunit status to reflect the correlation – the new map unit is now “Correlated” and the old map units are set to “Additional”:

The screenshot shows the 'Mapunit' table with columns for 'Mapunit Name', 'Kind', and 'Status'. Three mapunits are listed: 'Barnes loam, 3 to 6 percent slopes' (Kind: M, Status: correlated), 'Barnes-Buse loams, 3 to 6 percent slopes' (Kind: C, Status: additional), and 'Buse loams, 3 to 6 percent slopes' (Kind: M, Status: correlated). The 'Status' column for the third mapunit is highlighted with a dropdown arrow.

Mapunit Name	Kind	Status
Barnes loam, 3 to 6 percent slopes	M	correlated
Barnes-Buse loams, 3 to 6 percent slopes	C	additional
Buse loams, 3 to 6 percent slopes	M	correlated

The screenshot shows the 'Area' table with columns for 'Area Type NASIS Site Name', 'Area Type Name', 'Area Symbol', 'Area Name', 'Area Acres', 'MLRA Office', and 'Legend'. The 'Legend' column is expanded to show a sub-table with columns for 'Mapunit Symbol', 'Total Acres', 'National Mapunit Symbol', 'Mapunit Name', and 'Mapunit Status'. The sub-table lists three mapunits: '2156' (Symbol: 1gkht, Status: correlated), '2157' (Symbol: 1gkhu, Status: correlated), and 'BdC' (Symbol: cddj, Status: correlated).

Area Type NASIS Site Name	Area Type Name	Area Symbol	Area Name	Area Acres	MLRA Office	Legend
NSSC Pangaea	Non-MLRA Soil Survey Area	ND075	Renville County, North Dak...	571300	bismarck, nd	Detailed S

Mapunit Symbol	Total Acres	National Mapunit Symbol	Mapunit Name	Mapunit Status
N 2156	4560	1gkht	Barnes loam, 3 to 6 percent slopes	correlated
N 2157	5640	1gkhu	Buse loams, 3 to 6 percent slopes	correlated
E BdC	2398	cddj	Barnes-Buse loams, 6 to 9 percent slopes	correlated

The “Splitting Existing Mapunits” scenario is completed.